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#### **BY HAND**

Jeanne W. Stockman

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Magalie Roman Salas, Esq. Secretary Federal Communications Commission 445 12th Street, SW TW-A325 Washington, DC 20554

> Re: Report and Request for Waiver of PrimeCo Spectrum Holdings LLC on Plans for Implementation of Wireless Enhanced 911 Phase II Automatic Location Identification (ALI) System for Station WPQL237; CC Docket No. 94-102

Dear Ms. Salas:

On behalf of PrimeCo Spectrum Holdings LLC ("PrimeCo Spectrum"), we hereby submit its Plans for Implementation of Wireless Enhanced 911 Phase II Automatic Location Identification ("ALI") Systems in CC Docket No. 94-102 along with its request for waiver.<sup>1</sup>

On November 8, 2000, Chicago 20MHz, LLC ("Chicago 20MHz") requested an extension of the November 9, 2000 deadline to file its Phase II implementation report until 45 days after control of Station WPQL237 was transferred to a third party from a divestiture trust. The transfer of control to PrimeCo Wireless Communications LLC ("PrimeCo Parent") was consummated on October 31, 2001. On that same day, Chicago 20 MHz assigned the license to its wholly owned subsidiary PrimeCo Spectrum. In addition, by Public Notice, FCC 01-302, October 12, 2001, the Commission established November 30, 2001 as the deadline for small and mid-sized carriers to file E911 Phase II waiver requests. Therefore, this submission is timely filed and replaces the Petition for Limited Waiver of Section 20.18(e)-(h) filed by Chicago 20MHz in CC Docket No. 94-102 on August 9, 2001.

### **Background/Contact Information**

**1.** Carrier Identifying Information:

Carrier Name: PrimeCo Spectrum Holdings LLC

Carrier TRS Number: 820035<sup>2</sup>

**2.** The name, title, address, telephone number, facsimile number and e-mail address of the person or persons responsible for the carrier report.

Name: Mark Zaccone

Title: Director Network Engineering and Planning

Address: One Pierce Place

**Suite 1100** 

Itasca, IL 60143

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E-mail: mzaccone@primeco.com

#### **E911 Phase II Location Technology Information**

1. <u>Type of Technology</u>: Identification of the Phase II location technology(ies) that the carrier plans to deploy across its service territory, *e.g.*, network-only, handset-only, hybrid or a combination thereof. Please also include a complete description of the technology(ies) that is/are chosen and the name of the corresponding vendor or vendors. Indicate what technology will be used in each individual area of the carrier's service territory.

PrimeCo Spectrum has chosen a "hybrid" solution based on a technology developed by Snap Track and Lucent Technologies to provide Automatic Location Identification (ALI) for Phase II E911 Services. This technology was chosen based on its accuracy, service availability, and ease of implementation that will best serve the customer's public safety needs.

PrimeCo Spectrum is in discussions with technology suppliers to provide, on a service bureau basis, E911 Phase II ALI services. For a monthly service fee, a supplier will own, operate and maintain both the Position Determination Entity ("PDE") and the Mobile Positioning Center ("MPC") for PrimeCo. The PDE was developed by SnapTrack and Lucent Technologies and will need to be integrated into the chosen

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PrimeCo Spectrum does not serve any customers or have any revenues. All service is provided by and revenues are received by its parent company Chicago 20MHz. Therefore, PrimeCo Spectrum does not have a TRS number, and the TRS number of Chicago 20MHz is provided.

supplier's Hybrid Phase II solution. This integration will be between TCS Telecommunication Systems Inc.'s MPC (currently being used by PrimeCo Spectrum for Phase I E911), the chosen supplier's PDE and the Lucent Technologies wireless switching network (5ESS, ECP, AP).

The chosen supplier's service bureau hybrid solution will use advanced algorithms to calculate the handset's position based on the chipset within the handset. If the handset has the GPS chipset, then a GPS reading along with positioning calculations will determine the location. In cases where the GPS handset cannot see the required number of GPS satellites or the handset does not have the GPS chipset, a powerful combination of AFLT (Advanced Forward Link Trilateration) and RTD (Round Trip Delay) will be used to calculate the location. AFLT and RTD use the cell site location information along with some trilateration and delay algorithms to produce the location.

**Testing and Verification:** A description of the testing method used, or to be used, to determine the accuracy of the ALI solution(s) selected, and a description of the results of tests already conducted. Note: the Commission provided guidelines for determining accuracy of ALI solution in OET Bulleting No. 71, issued April 12, 2000. Copies of this bulletin can be downloaded from the Commission's Web site, at http://www.fcc.gov/oet/info/documents/bulletins/.

To date, PrimeCo Spectrum has not partnered with any equipment vendors to conduct any trials or testing to determine accuracy. PrimeCo Spectrum has relied upon vendor supplied trial data. PrimeCo Spectrum has also reviewed the conclusions of those wireless carriers that have conducted tests and submitted their conclusions into the record for this docket. Their conclusions confirm PrimeCo Spectrum's determination that a hybrid-based solution offers the best potential performance for PrimeCo Spectrum's CDMA system.

PrimeCo Spectrum will be working on a development plan with a vendor to roll out the service bureau arrangement. This will be a new service for all vendors, as Phase II hybrid E911 has not been commercially deployed in a service bureau offering. As plans are developed, PrimeCo Spectrum will most likely be one of the first operators to use the service bureau arrangement. As a result, PrimeCo Spectrum will play an integral part in the deployment and testing phase of the E911 service. The deployment process will include FCC accuracy testing.

3. <u>Implementation Details and Schedule:</u> A complete description of the carrier's strategy and schedule for the installation of the hardware and software needed to implement its chosen technology (handset-based, network-based or hybrid systems). For example, indicate whether both hardware and software changes will be necessary and fully describe the precise nature of the changes. In addition, please provide the roll-out schedule for the installation of the ALI technology(ies).

In choosing a supplier's service bureau hybrid solution, PrimeCo Spectrum will need to work with the supplier on a definitive time line. Through discussions with various vendors of this technology, the below schedule seems to be a reasonable software development and integration time period.

A vendor will need a minimum of 90 business days for a committed software development effort on its part to integrate the PDE into the existing network MPC. This would begin in January 2002 and be completed by mid-May 2002. A vendor will then require at least 5 business days for integration testing prior to a field trial. The integration testing would start mid-May and be completed by the end of May.

A vendor would then need approximately 30 business days for the field trial, which includes wireless operator network integration and FCC accuracy compliance testing. This would run from June 2002 through mid-July 2002. Finally, PrimeCo Spectrum and the chosen vendor would run through an acceptance test plan and final testing to have a commercially viable E911 Phase II hybrid system in place by August 1, 2002.

Once the E911 Phase II system is commercially ready, additional time will be needed to integrate it with each of the PSAPs. PrimeCo Spectrum expects that as of December 31, 2002, all PSAPs with valid requests that will have been pending for six months or more will be fully integrated with the E911 Phase II system and that after such date, all valid PSAP requests can be accommodated within six months of the request.

**4. PSAP Interface:** A description of hardware and software changes necessary to transmit Phase II data to PSAPs and the carrier's strategy and schedule for the installation and/or modification of such hardware or software changes.

Each PSAP requirement will be determined by the PSAP itself. The type and format of information requested by the PSAP and the hardware deployed by the PSAP will determine the additional hardware and software requirements, if any, that would be needed for PrimeCo Spectrum. The chosen vendor will provide information to all of the PSAPs regarding what would be required to interface with them.

**Existing Handsets:** A description of the carrier's strategy and schedule for the upgrade and/or replacement of existing customer handsets, if applicable.

PrimeCo Spectrum will phase-in ALI-capable handsets according to the following schedule:

Begin sales	4/30/02
25% of new activations	11/30/02
50% of new activations	07/31/03
100% of new activations	04/30/04
95% of embedded base	12/31/05

As a smaller carrier, PrimeCo Spectrum is not in a position to command its handset vendors to supply ALI-capable handsets on the type of schedule that can be achieved by large carriers with nationwide footprints such as Verizon Wireless ("Verizon"). Therefore, even though this schedule calls for a slightly slower start-up and phase-in of ALI-capable handsets than the schedule approved by the Commission for Verizon, it is an aggressive schedule for PrimeCo Spectrum. Moreover, the proposed schedule does not alter the December 31, 2005 deadline for having 95% of the embedded customer base with ALI-capable handsets.

**6.** <u>Location of Non-Compatible Handsets:</u> A description of the best efforts that carriers employing a handset-based or hybrid system will take to accommodate handsets that are incompatible with the carrier's ALI system, *e.g.*, handsets that do not have ALI capability, or handsets that are ALI - capable, but are not compatible with the carrier's particular handset-based or hybrid system.

Wireless assisted GPS technology improves upon conventional GPS by combining the information from GPS satellites, Round Trip Delays (RTD) and in CDMA formats, Advanced Forward Link Trilateration (AFLT) to accurately and reliably pinpoint a wireless device. For legacy handsets (handsets without GPS enabled chipsets) however, the hybrid system uses Forward Link Triangulation to help locate such mobiles. This method is based on Forward Link Time differences of forward link signals (Pseudorandom Noise ("PN") offsets) that are reported by the mobile. The accuracy of this method can vary with the number of base stations visible to the mobile in question. This method provides better performance than cell sector and it is a means to try and locate legacy handsets.

7. Other Information: Please provide any information, including a description and history of any Phase II requests received from PSAPs, that will assist the Commission and affected parties in monitoring and coordinating the deployment of E911 Phase II in accordance with the timetables set forth in the Commission's rules.

The following PSAPs within PrimeCo Spectrum's service coverage area have requested Phase II E911 service:

State	County	PSAP	Phase II request date
Indiana	Elkhart	Elkhart	1/23/01
Indiana	Jefferson	Jefferson Sheriff	4/20/01
Indiana	Lake	Lake Sheriff	4/13/01
Illinois	Cook	<b>Barrington Hills</b>	5/11/01
Illinois	Cook	City of Chicago	7/31/00

Request for Waiver by Verizon Wireless, Order, CC Docket No.94-102, FCC 01-299, released October 12, 2001, at para. 37.

Illinois	Cook	Morton Grove	1/09/01
Illinois	Lake	Waukegan	11/14/01

PrimeCo Spectrum will use the new Commission guidelines established in *Petition of City of Richardson, Texas*, CC Docket 94-102, FCC 01-293, released October 17, 2001, to make a determination of whether such requests are valid.

PrimeCo Spectrum has received 179 requests from PSAPs to provide E911 Phase I service. As discussed in the waiver request below, the trustee for PrimeCo Spectrum's predecessor Chicago 20MHz asserted that Chicago 20MHz did not have the resources to implement E911 Phase I service at a rapid pace because it was under the control of a divestiture trust since August 29, 2000. Control was not transferred to the new controlling entity PrimeCo Parent until October 31, 2001. As a result, PrimeCo Spectrum is now playing catch-up to satisfy these various PSAP requests. It has already implemented E911 Phase I service to 54 PSAPs and has worked out implementation timetables with each of the remaining requesting PSAPs. PrimeCo Spectrum anticipates that by June 30, 2002, it will be providing E911 Phase I service to every PSAP that is ready and has had a request for E911 Phase I service that will have been pending for six months or more. Because PrimeCo Spectrum has worked out deployment schedules with each of the PSAPs, no waiver is necessary for E911 Phase I.

## Request for Waiver of Section 20.18(g) of the Commission's Rules

This waiver request is based in part on exceptional circumstances arising from the fact that Chicago 20MHz was controlled by a divestiture trust from August 29, 2000 until October 31, 2001. Specifically, as a condition of approval of the merger of Bell Atlantic Corporation ("Bell Atlantic") and GTE Corporation ("GTE"), the Commission and the U.S. Department of Justice ("DOJ") required the divestiture of certain overlapping cellular and PCS licenses held by Bell Atlantic and GTE. To afford themselves sufficient time to divest the licenses properly and so as not to delay closing of their merger, Bell Atlantic and GTE, with Vodafone AirTouch Plc, sought consent from the Commission and the DOJ to transfer control of or assign certain licenses to divestiture trusts as provided in section 20.6(e)(4) of the Commission's rules. On June 26, 2000, the Commission issued an order granting this consent.

GTE Corporation and Bell Atlantic Corporation, Memorandum Opinion and Order, CC Docket No. 98-184, FCC 00-221, released June 16, 2000; *United States v. Bell Atlantic Corp.*, et al., Final Judgment, Civ. No. 1:99CV01119 (LFO) (D.D.C. Apr. 18, 2000 ("Final Judgment").

<sup>&</sup>lt;sup>5</sup> 47 C.F.R. § 20.6(e)(4).

In re Applications of GTE Corporation, Vodafone AirTouch PLC, and Bell Atlantic Corporation For Consent to Transfer Control of or Assign Properties to

*Order*, Chicago 20MHz was transferred to a divestiture trust on August 29, 2000. Control was not transferred to PrimeCo Parent until October 31, 2001. Thus, PrimeCo Parent has been in control for only one month.

The Commission's rules provide that a waiver may be granted "[i]n view of unique or unusual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative." In the case of E911, the Commission has "recognized that there could be instances where technology-related issues or exceptional circumstances may mean that deployment of Phase II may not be possible by October 1, 2001, and indicated that these cases could be dealt with through individual waivers as these implementation issues are more precisely identified.

PrimeCo Spectrum presents such exceptional circumstances given the fact that the license has been controlled by a divestiture trust from August 29, 2000 until October 31, 2001. The divestiture trustee has asserted that he was not in a position to do any advanced planning for E911 Phase II, because the divestiture trustee was not in a position to make any decisions for a future buyer. Deploying Phase II capability involves substantial costs and resources. A carrier must investigate various ALI technologies, coordinate with PSAPs that have requested Phase II service, select the technology that best suits its network and the FCC's requirements, establish a capital expenditure plan, enter into contracts with vendors to acquire the necessary equipment and software, and install and test these upgrades. As the Commission has recognized, "advanced planning is essential" to meeting the FCC's Phase II deployment schedule. 10

In the limited time that it has had, PrimeCo Spectrum has worked hard to develop its E911 Phase II plans. However, because of the limited amount of time available, these

Divestiture Trust and For Temporary Waiver of the CMRS Spectrum Cap Rule, 15 FCC Rcd 11608 (2000) ("Divestiture Order").

<sup>&</sup>lt;sup>7</sup> 47 C.F.R. § 1.925(b)(3)(ii).

The deadline has since been extended to November 30, 2001. *Commission Establishes Schedule for E911 Requests by Small and Mid-Sized Wireless Carriers*, CC Docket No. 94-102, Public Notice, FCC 01-302, October 12, 2001.

Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion and Order, 16 FCC Rcd 3780, at para. 43 (2000).

Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Third Report and Order, 14 FCC Rcd 17388, at para. 86 (1999).

plans represent PrimeCo Spectrum's best judgment for an E911 Phase II solution. As PrimeCo finalizes its supplier agreements, further fine-tuning may be necessary.

In view of the foregoing, PrimeCo Spectrum requests a waiver of Section 20.18(g) of the Commission's rules to permit it additional time to implement E911 Phase II. As required by the Commission's Public Notice, <sup>11</sup> PrimeCo Spectrum's request is specific, focused, and limited in scope with a clear path to full compliance. It is focused because it requests a waiver of the implementation deadlines, but does not request a waiver of any other aspect of the Commission's E911 Phase II rules. It is specific because Section 3 of the implementation report provides specific dates for the implementation of network changes that must be made, and Section 5 of the report provides specific benchmark dates for the phase-in of ALI-capable handsets. It is limited in scope because it does not seek any extraordinary delays in implementation, and the proposed schedule is roughly similar to schedules already accepted by the Commission. <sup>12</sup> It demonstrates a clear path to full compliance because it does not alter the final compliance benchmark of December 31, 2005, when 95% of all embedded handsets must have ALI capability.

Please address any inquiries regarding this matter to the undersigned.

Respectfully submitted,

Jeanne W. Stockman

Wireless Telecommunications Bureau Provides Guidance on Filings by Small and Mid-Sized Carriers Seeking Relief from Wireless E911 Phase II Automatic Location Identification Rules, CC Docket No. 94-102, Public Notice, DA 01-2459, released October 19, 2001.

See, e.g., Request for Waiver by Verizon Wireless, Order, CC Docket No.94-102, FCC 01-299, released October 12, 2001, at para. 37; Request for Waiver by AT&T Wireless Services, Inc., Order, CC Docket No. 94-102, FCC 01-294, released October 12, 2001, at paras. 9 & 14; Request for Waiver by Cingular Wireless LLC, Order, CC Docket No. 94-102, FCC 01-296, released October 12, 2001, at para. 15; Request for Waiver by Sprint Spectrum L.P. d/b/a Sprint PCS, Order, CC Docket No.94-102, FCC 01-297, released October 12, 2001, at para. 33; Request for Waiver by Nextel Communications, Inc., Order, CC Docket No.94-102, FCC 01-295, released October 12, 2001, at para. 37.